

I was informed by Mr. Dann at that time that it was his intention to immediately contact the Warren Commission in Washington and file a criminal case, a case of assault and battery, against all parties conducting this hearing, including myself and Mr. Tonahill. At this point I was summarily fired, together with Mr. Tonahill, and I feel that this matter of course is something that Mr. Dann is not aware of, that all of this that has taken place here today—I think that we have tried to protect the rights of Jack Ruby, and I put this in to merely show that the call was made, and if any of you gentlemen have fear of reprisal or for whatever purpose it might be, and that I am sure that something further will be made of it.

Again, I wish to state this that in my opinion, whether we are still employed in the case, and I have not been fired by Jack Ruby, that we feel absolutely that his rights have been protected.

Mr. ALEXANDER. His brother Earl has not fired you either.

Mr. SPECTER. That concludes the proceedings. Thank you all very much.

Mr. ALEXANDER. Just one more thing.

I myself will make no statement to anybody outside this room about anything, and let me make the suggestion that whatever statement is made, is made by Mr. Specter, if you want to agree on that.

Mr. TONAHILL. In fact I think that if Mr. Specter is going to give this statement, that if he tells them that a polygraph has been taken, I don't think any of the questions and answers should be given out.

Mr. FOWLER. No; I very definitely and specifically request that these matters that have been gone into here today be for the Commission and the Commission only. It is our wish.

Mr. SPECTER. That will be done. The Commission heretofore has made no public statement of content to any extent. It has been the practice of the Commission to announce only what witnesses have been heard, and a very general statement of the witness' status. In fact, Mr. Ruby was insistent that there be a statement made in terms of his request and his cooperation, and that had been discussed before as being the appropriate limit of such a statement. It's my view that that should be followed up on, but no details of any sort stated as to his responses or anything else that transpired in this proceeding today.

Mr. TONAHILL. Yes; that he cooperated to the best of his ability.

Dr. BEAVERS. Any questions that are asked me, I will refer to Mr. Arlen Specter.

Mr. SPECTER. Very fine, Dr. Beavers.

Thank you very much. This will conclude these proceedings.

Proceedings concluded at 10 p.m.

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### TESTIMONY OF BELL P. HERNDON

The testimony of Bell P. Herndon was taken at 2:05 p.m., on July 28, 1964, at 200 Maryland Avenue NE., Washington, D.C., by Mr. Arlen Specter, assistant counsel of the President's Commission.

Mr. SPECTER. May the record show that this is a deposition proceeding of the President's Commission on the Assassination of President Kennedy.

Present today is Mr. Bell P. Herndon, a special agent of the Federal Bureau of Investigation, who has been asked to testify concerning the results of the polygraph examination administered to Jack Ruby in Dallas, Tex., on July 18, 1964.

With that preliminary statement of purpose, would you rise, please, Mr. Herndon, and raise your right hand?

Do you solemnly swear that the testimony you shall give in this deposition proceeding before the President's Commission on the Assassination of President Kennedy will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. HERNDON. I do.

Mr. SPECTER. Would you state your full name for the record, please?

Mr. HERNDON. My name is Bell P. Herndon.

Mr. SPECTER. What is your profession or occupation?

Mr. HERNDON. I am a special agent of the Federal Bureau of Investigation.

Mr. SPECTER. How long have you been so occupied?

Mr. HERNDON. I have been employed as a special agent going on 14 years.

Mr. SPECTER. What specialty, if any, do you have with the Federal Bureau of Investigation?

Mr. HERNDON. I am presently the polygraph supervisor and polygraph examiner assigned to the FBI laboratory, Washington, D.C.

Mr. SPECTER. Would you outline briefly your educational background, please?

Mr. HERNDON. I received a bachelor of science degree from St. Lawrence University in 1947.

I have been in the FBI since 1951 and have been employed as a special agent primarily in field investigator work for approximately 10 years. The past 4 years I have been fully assigned to the laboratory in the capacity of a polygraph supervisor.

Mr. SPECTER. What specialized training, if any, do you receive in order to qualify for being a polygraph operator?

Mr. HERNDON. Upon assignment to the FBI laboratory I underwent an intensive 6-months training program under a doctor, Ph. D. in psychology, who was a special agent polygraph examiner assigned to the New York office.

I also received considerable training from other special agents in the FBI laboratory who had graduate work in physiology and law.

After completion of 6 months' intensive training, I was declared qualified to handle polygraph examinations for the Federal Bureau of Investigation.

Mr. SPECTER. And approximately how many polygraphic examinations have you conducted during your service with the Federal Bureau of Investigation?

Mr. HERNDON. I have either given, supervised, or reviewed several thousand polygraph examinations.

Mr. SPECTER. Would you outline briefly just what the polygraph machine is, and how it functions?

Mr. HERNDON. The polygraph instrument, of course, is commonly known to the public as the lie detector. In fact it is not such a device. The polygraph is simply an instrument which is designed to record certain physiological responses under stimuli in a carefully controlled interrogation. These physiological responses may accompany and indicate deception. It is used primarily as an investigative aid by the Federal Bureau of Investigation.

Mr. SPECTER. From what does the machine derive its name "polygraph"?

Mr. HERNDON. The name polygraph is derived from the Greek derivative, poly meaning many, graph meaning writings and the actual polygraph chart will portray several writings indicating physiological responses of the examinee.

Mr. SPECTER. How many writings are there specifically which are made by the polygraph instrument?

Mr. HERNDON. On the current polygraph used throughout the field the instrument records three different physiological responses.

Mr. SPECTER. And would you identify those three physiological responses, please?

Mr. HERNDON. The first physiological response recorded on the polygraph pertains to the pneumograph tracing, pneumo pertains to the respiratory pattern of an individual. In other words, it records the inhalation and exhalation tracings of the person as he is normally breathing. It also records what we call the respiratory ratio, the ratio of the inhalation stroke to the exhalation stroke.

The second component utilized in the polygraph technique today is generally called the psychogalvanic skin response.

Mr. SPECTER. Spell that, please.

Mr. HERNDON. Actually, it is referred to as the galvanic skin response, galvanic. This particular response is obtained by electrodes placed on the examinee's hands or fingers, a small minute amount of electrical current is passed through the skin, and the galvanometer will record the minute changes in the electrical skin resistance of the skin or the electrodermal response.

The third component utilized in polygraph technique is the cardiograph. This particular component measures the relative blood pressure changes and also the changes in the heart rate or pulse beat. The tracing is obtained by a pneumatic cuff being placed on the arm, usually the left arm, a certain amount of pressure applied so that the mean blood pressure can be obtained and the tracing is recorded on a moving sheet of chart paper.

Mr. SPECTER. Would you outline briefly the development of the polygraph instrument, please?

Mr. HERNDON. Over the years psychologists and physiologists have been aware of the fact that many people seem to respond physiologically under emotional stress, one, of course, being under a stress of a deception.

The more serious lie a person tells, quite frequently he is likely to have a physiological response. Over the years people who have dealt with interrogation techniques have frequently noticed that when a person is deceiving, that they visibly respond emotionally. In other words, they may not look a person right in the eye.

There may be a choking up of the throat. They may become flushed in the face. Based on this general common sense observation, law enforcement individuals who had psychological and physiological training decided in about 1920 that if they could obtain an instrument to record certain physiological changes with regard to suspects in criminal cases, they might be in a better position to perhaps determine whether or not the person has been telling the truth.

They developed an instrument which was eventually called the polygraph or so-called lie detector.

Through the years it has been used by law enforcement. It is primarily used, as I said before, as an investigative aid, and it has been helpful in that it can provide investigative direction to people in the law enforcement profession.

Mr. SPECTER. What is its level of reliability in indicating patterns of deception?

Mr. HERNDON. There has been no conclusive scientific objective study in that regard, and as of today there are no valid statistics with regard to its actual objective reliability.

Mr. SPECTER. What is your opinion as to its level of reliability in measuring patterns of deception in a normal person?

Mr. HERNDON. Well, the polygraph, of course, measures certain physiological responses which have to be interpreted. It must be clearly understood that the physiological responses that are portrayed on a polygraph chart can often be caused by things other than deception, such as fear, anxiety, nervousness, dislike, and many other of these emotions.

A polygraph examiner has to be extremely skilled and conservative in his estimation as to whether or not it is deception. I cannot give you any clear-cut personal opinion as to the validity of the technique with regard to its percentage of reliability.

Mr. SPECTER. Aside from an opinion as to percentage of reliability, what is your opinion in a very general way as to the ability of a well-trained, conservative examiner to detect a pattern of deception in a normal person under appropriate standards of administration?

Mr. HERNDON. Based on a hypothesis of all factors you mentioned, a polygraph examiner under ideal conditions can generally interrogate a person, and if he has been able to obtain what he considers good control questions, he then may be able to come up with a conclusion which would indicate whether or not a person is deceiving or not.

Mr. SPECTER. Would you describe what you mean by a control question?

Mr. HERNDON. The control question is the question on which you would expect the examinee to probably lie, or have some emotional response which can be used for comparative purposes with regard to the relevant questions of the interrogation.

Mr. SPECTER. Would you give an example of what you mean by control question, then?

Mr. HERNDON. Yes, I can.

In a bank embezzlement case, a good control question with an individual might be, "Have you ever stolen anything in your life that didn't belong to you?"

In that regard it is expected the person would probably either hedge or de-

ceive, and, therefore, the examiner can usually have an indication of whether or not this person will respond to a deception based on the examinee's response to that question.

Mr. SPECTER. Mr. Herndon, what is the policy of the Federal Bureau of Investigation on the use of the polygraph examination?

Mr. HERNDON. The FBI uses the polygraph technique purely as an investigative aid, in very carefully selected cases.

As I have said before, we feel that the polygraph technique is not sufficiently precise to permit absolute judgments of deception or truth without qualifications. The polygraph technique has a number of limitations which must be considered by the examiner. The instrument, again, I said before, is designed to record under proper stimuli emotional responses in the form of physiological variations which may accompany and indicate deception.

Mr. SPECTER. What effect, if any, would there be on a polygraph examination if the subject were a psychotic depressive with respect to mental condition?

Mr. HERNDON. In that particular case, the FBI ordinarily would not render a polygraph examination to any individual in which there was any indication or evidence that he was psychotic.

Mr. SPECTER. What validity would a polygraph examination have on a person who was a psychotic depressive with respect to the mental condition?

Mr. HERNDON. The examination would be completely inconclusive or invalid in view of the fact that a psychotic individual is divorced from reality, and the tracings on his polygrams could not be logically interpreted.

Mr. SPECTER. Then is it necessary that a person be in touch with reality and understand the nature of the questions and answers in order for a polygraph examination to have any validity?

Mr. HERNDON. Yes, it is.

Mr. SPECTER. Did you have occasion to conduct a polygraph examination on Jack Ruby?

Mr. HERNDON. Yes, I did, on July 18, 1964.

Mr. SPECTER. And at whose request was that polygraph examination conducted?

Mr. HERNDON. The examination of Jack Ruby was conducted at the specific request of the President's Commission.

It is my understanding that Mr. Ruby specifically requested such a polygraph examination to the Commission in a prior interview he had with the Chief Justice.

Mr. SPECTER. Were you present during the course of the entire session when Mr. Ruby was questioned, both before, during and after the actual administration of the polygraph examination?

Mr. HERNDON. Yes, I was.

Mr. SPECTER. And before the test was actually administered, did anyone ask Mr. Ruby whether he wished to have a polygraph examination conducted on him?

Mr. HERNDON. Yes. I believe Mr. Ruby was asked that question by the Commission. I am not sure of whether the defense attorney specifically asked him whether or not he wanted to take it, but I know that they were definitely against him taking the polygraph examination.

In my initial discussion with Mr. Ruby, I again also asked him to sign a voluntary waiver of consent to insure that he was freely and voluntarily taking the polygraph examination.

Mr. SPECTER. And what was Mr. Ruby's response on the question of whether he wanted to take the polygraph examination?

Mr. HERNDON. He clearly implied that he desired to proceed and take the polygraph examination.

Mr. SPECTER. Was it an implication or was it a direct statement on his part that he wanted the examination?

Mr. HERNDON. It was a direct statement, and he signed the waiver of consent.

Mr. SPECTER. Where was the polygraph examination conducted?

Mr. HERNDON. The polygraph examination of Jack Ruby was conducted in one of the rooms in the Dallas county jail.

Mr. SPECTER. Who was present at the time the examination was conducted?

Mr. HERNDON. Present during the examination were Mr. Arlen Specter of the President's Commission, myself, representing the FBI, Special Agent W. James

Wood, of the Federal Bureau of Investigation, Dallas, Tex., office, Mr. Ruby's attorneys were present, one being chief counsel Mr. Clayton Fowler, another attorney was present by the name of Mr. Joe Tonahill. Also present during the examination was a representative of the Dallas district attorney's office, a Mr. William Alexander.

Mr. SPECTER. Was he present during the time of the examination or during the preliminary discussion on questions only?

Mr. HERNDON. He was present during the entire examination except for that phase in which Mr. Ruby was actually responding to my questions while he was actually on the instrument.

Mr. SPECTER. And who else was present?

Mr. HERNDON. Also present during the entire polygraph proceedings was a Dr. William Beavers, I believe, of Dallas, Tex., and a chief jailer, I believe his name was E. L. Holman. There was a court reporter, Odell Oliver, also present during the proceedings.

Also present during the preliminaries of the proceedings was a gentleman from the Dallas sheriff's office by the name of Mr. Sweat, who indicated that he was a polygraph examiner.

Mr. SPECTER. Was a request made that he not be present during the course of the examination?

Mr. HERNDON. After consultation with Mr. Specter and myself, I believe Mr. Specter made arrangement with the sheriff, Mr. Decker, that Mr. Sweat not be present during the polygraph examination and further proceedings.

Mr. SPECTER. What was the physical arrangement of the room with respect to Mr. Ruby's positioning during the time that the polygraph examination was actually administered?

Mr. HERNDON. I attempted to arrange Mr. Ruby in such a position that there would be a minimum of distraction and disturbance to him during the actual polygraph examination. He was placed rather closely against a wall where there were no pictures or no distracting marks or implementations on the wall. I also tried to place him in such a position so that he could not readily see anyone else who was in the room during the proceedings.

Mr. SPECTER. Were you successful in placing him in a position where he could not see anyone else while the test was being administered?

Mr. HERNDON. I believe he was in a position that only his secondary vision from the sides would possibly give him the impression that somebody was in the room.

Mr. SPECTER. What effect, if any, did the presence of the other people in the room have on the administration of the test, in your opinion?

Mr. HERNDON. Normally during a polygraph examination the only ones in the room are the examinee and the examiner, and during Bureau proceedings we usually have another agent in the room out of sight that takes notes. It is considered an undesirable factor to have many people present in the room during a polygraph examination, particularly if these people are involved in any way in the case, such as the defendant's attorney or someone who has a personal and keen knowledge in the proceedings. In this particular instance, it appeared to me that Mr. Ruby divorced the presence of these people from his mind during his response to the questions. However, it should be considered a factor which is one that could tend to negate a valid conclusion with regard to chart interpretation.

Mr. SPECTER. Have you taken that factor, then, into account in your evaluation of chart interpretation?

Mr. HERNDON. Yes; I have.

Mr. SPECTER. Mr. Herndon, did you hear the testimony of Dr. William Beavers which was taken immediately following the administration of the polygraph examination commencing at 9:10 p.m., on July 18, 1964?

Mr. HERNDON. I heard his testimony.

Mr. SPECTER. Did you hear him testify in a conclusory fashion that: "These symptoms," referring to symptoms which he had described, "plus the depression which was evident caused me to diagnose a psychotic depressive reaction"? Did you hear him make that diagnosis?

Mr. HERNDON. Yes; I did.

Mr. SPECTER. If that diagnosis is accurate, would there be any validity in a polygraph examination of Mr. Ruby?

Mr. HERNDON. There would be no validity to the polygraph examination, and no significance should be placed upon the polygraph charts.

Mr. SPECTER. Did you further hear Dr. Beavers testify as follows: "In the greater proportion of the time that he," referring to Ruby, "answered the questions, I felt that he was aware of the questions and that he understood them, and that he was giving answers based on an appreciation of reality."

Mr. HERNDON. I heard him so testify.

Mr. SPECTER. If Mr. Ruby's mental condition was accurately characterized in that latter statement, then would the polygraph examination have validity in accordance with the limitations which you heretofore described?

Mr. HERNDON. Well, based on the hypothesis that Ruby was mentally competent and sound, the charts could be interpreted, and if those conditions are fact, the charts could be interpreted to indicate that there was no area of deception present with regard to his response to the relevant questions during the polygraph examination. However, I have no specific information to my knowledge which would resolve the hypothesis or the suggestion made by Dr. Beavers that Ruby was in fact rational and fully competent at that time, and, therefore, I would still have to render an inconclusive opinion with regard to the charts.

Mr. SPECTER. When you say in your last answer if Ruby was competent or sane, by that do you mean the characteristics which Dr. Beavers described, stated specifically, that he understood the questions and the answers, that he was giving answers based on appreciation of reality?

Mr. HERNDON. I qualified my answer to the previous question because of the fact, if you will recall, Dr. Beavers also testified later that it is entirely possible for a person who is psychotic to still appear to be rational and to be fully aware of reality. This particular testimony is with regard to specific questions presented to Dr. Beavers by Mr. Tonahill, and it is a known fact that certain psychotics at times can appear completely rational and appear to be competent.

Mr. SPECTER. The distinction on that, though, would be whether or not they are, in fact, in touch with reality, understanding the nature of the questions and answers, or whether they only appear to be in touch with reality? Would that not be the key distinction that Dr. Beavers is making in his testimony?

Mr. HERNDON. I am not sure I follow you there, Mr. Specter. Will you repeat that again?

Mr. SPECTER. Yes. You say that Dr. Beavers said that many psychotics appear to understand the questions or appear to be in touch with reality.

Mr. HERNDON. He said it is possible, I believe, that a psychotic could appear to be rational and have a good memory, but still be a psychotic individual or psychotic personality.

Mr. SPECTER. Yes; but wasn't the key distinction that Dr. Beavers was making was whether or not, in fact, the individual did understand the questions as opposed to whether he appeared to understand the questions?

Mr. HERNDON. Yes; I gather from Dr. Beavers' testimony that in this particular instance during this particular phase of the examination with regard to two exceptions which he mentions, Ruby appeared to be fully aware of the intent and the meaning of the question and was rational in his reply.

Mr. SPECTER. But didn't he go beyond that, Mr. Herndon, that is he did not use the qualifying term of Mr. Ruby's appearing to be in touch with reality, but said, and I will make the portion of the transcript available to you: "I felt that he was aware of the questions and that he understood them, and that he was giving answers based on an appreciation of reality."

Now, you have read that along with me. The distinction I am making here is that Dr. Beavers doesn't say here that Mr. Ruby appears to be in touch with reality, but that he, in fact, is, according to Dr. Beavers' conclusion, during the course of this examination, except for two areas which I am going to come to, that Ruby was, in fact, in touch with reality and did understand the nature of the questions and answers.

Mr. HERNDON. I recall he did specifically make that comment.

Mr. SPECTER. So that whatever ultimate conclusions flow from whether Ruby was psychotic or whether he was in touch with reality are beyond your ken as a polygraph examiner? You merely rely on what the psychiatrist says in formulating your conclusions; is that not so?

Mr. HERNDON. That is correct, Mr. Specter. I would defer to psychiatrists, of course, with regard to whether or not a person is mentally competent or not.

Mr. SPECTER. So that if Mr. Ruby was psychotic, then the polygraph examination would have no validity?

Mr. HERNDON. That is correct, sir.

Mr. SPECTER. And if, on the other hand, Mr. Ruby was competent and in touch with reality, understanding the nature of the questions and the content of his answers, then the polygraph examination would have validity?

Mr. HERNDON. Under that theory, then the polygraph examination could be interpreted, and there would be a conclusion rendered, still considering, of course, all the limitations of the polygraph technique, of course.

Mr. SPECTER. Now, what two areas of questions did Dr. Beavers exclude in the portion of his answer which you and I just read together?

Mr. HERNDON. Dr. Beavers made specific reference to two questions which were originally drafted by himself, Dr. Beavers. These questions were in regard to whether or not Ruby believed his family were harmed or have been harmed, whether or not his family have been harmed for what he did, and the other question was in regard to whether or not he believed his chief counsel, Mr. Fowler, was in danger for defending him, Ruby, that is.

Mr. SPECTER. And as the record will show, those were the two questions that Dr. Beavers referred to where he felt Ruby was out of touch with reality when he answered them during the course of the polygraph examination?

Mr. HERNDON. That is correct.

Mr. SPECTER. And focusing for just a moment on those two questions before we proceed to your conclusions, what answer did Mr. Ruby give to the question as to whether his family had been harmed as a result of what he did?

Mr. HERNDON. During the actual polygraph examination, when that question was asked, Mr. Ruby failed to respond either yes or no.

Mr. SPECTER. Is there any portion of the overall examination which precedes the time when the machine is activated and the needles are operating, so to speak?

Mr. HERNDON. Yes. During the pretest interview, the actual questions are carefully discussed with the examinee, in this case Mr. Ruby, so that he fully understands the intent and the meaning of the questions.

Mr. SPECTER. And is that a normal part of a polygraph examination?

Mr. HERNDON. That is a standard procedure in a polygraph interrogation technique.

Mr. SPECTER. And what is the purpose for that?

Mr. HERNDON. The purpose of that primarily is to be sure that the examinee fully understands the question and that there are no problems of surprise or semantics. It also psychologically conditions the subject in that he commits himself prior to the test and will be conditioned to know that the question will be asked again and he will have to make a decision as to how he is going to answer it, and whether or not he is going to attempt to deceive.

Mr. SPECTER. And what answer did Mr. Ruby give to the question about whether his family had been harmed as a result of what he did during the course of the preliminary discussion session?

Mr. HERNDON. To be sure; could we just check the transcript on that? I believe he did say yes, with regard to that question.

Mr. SPECTER. Certainly. Please do check the transcript, or your notes, either way which would be most expeditious. (Pause.) Have you now had an opportunity to check the transcript on that last answer, Mr. Herndon?

Mr. HERNDON. Yes; I have reviewed the transcript, and with regard to both those questions Mr. Ruby replied "Yes."

Mr. SPECTER. During which portion of the examination?

Mr. HERNDON. This was during the pretest interview.

Mr. SPECTER. When you say he gave "yes" answers to both questions, you mean the question about "did he think his family had been harmed as a result of what

he did," and also the question about "whether his defense counsel, Mr. Clayton Fowler, was in danger as a result of representing Mr. Ruby"?

Mr. HERNDON. Yes; in both instances he volunteered yes.

Mr. SPECTER. Now, Mr. Herndon, based on the hypothesis or assumption that Mr. Ruby was in touch with reality, and understood the nature of the questions, and the quality of his answers, what opinion did you formulate, if any, as to patterns of deceptiveness on the relevant questions during the polygraph examination?

Mr. HERNDON. Based on the hypothesis that you just gave, Mr. Specter, a review of the polygraph charts would indicate to me, if in fact Ruby was mentally competent and sane, that there was no indication of deception with regard to the specific relevant pertinent questions of this investigation.

Mr. SPECTER. At this time, Mr. Herndon, I would like to take up the first series of questions and answers, and ask you to state for the record what they were and what graph readings you took by way of elaborating upon the conclusion which you just gave.

For the record I shall mark that first chart as Herndon Deposition Exhibit No. 1.

(The document referred to was marked Herndon Deposition Exhibit No. 1 for identification.)

Mr. HERNDON. As I review the first polygraph chart I notice that I made a notation at 1 p.m., that Ruby's attorneys agreed to let Mr. Ruby take the test. I actually started my adjustments of the instruments on Mr. Ruby at 3 p.m. In this regard, I believe it proper to state that I was using a Stoelting deceptograph model 22500 which utilizes three components, the pneumograph, the galvanic skin response, and the cardiograph. Also utilized during the examination was a Stoelting polygraph subject chair.

Mr. SPECTER. Will you describe the chair used during the course of this examination, please?

Mr. HERNDON. The polygraph subject chair is so designed to adjust the level of the arms and to give complete and full support to the arms. This is necessary to provide a minimum of restriction or pressure on both of the arms of the examinee. This is desirable in order to obtain the best possible tracing with regard to a person's relative blood pressure changes and relative changes in the heart rate. It is also desirable to obtain the best possible tracing of the electrodermal responses or the galvanic skin responses. The chair is also constructed so that the person will generally refrain from slouching or crossing his legs during the examination, both of which are undesirable.

Mr. SPECTER. Would you now then proceed to testify about the recordings on the chart?

Mr. HERNDON. I also notice with regard to the room that the lighting in the room was incandescent and not fluorescent, this possibly being a factor in the tracings with regard to the galvanic skin response. The incandescent lighting is much preferable, and, therefore, I feel that there was no outside electrical disturbance with regard to the tracing of the GSR, galvanic skin response.

Mr. SPECTER. Could you elaborate just a little more on why you think the lighting would have an effect on the galvanic skin response testing device?

Mr. HERNDON. I made a notation of this fact in my notes, in view of the fact that it has been evident in the past that fluorescent lighting at times has interfered with proper tracings with regard to the galvanic skin response.

Mr. SPECTER. And fluorescent lighting was present here?

Mr. HERNDON. No, fluorescent lighting was not present here, and the desirable or preferable incandescent lighting was present.

Mr. SPECTER. So that that would have a beneficial effect on eliminating a potential source of interference?

Mr. HERNDON. Not beneficial, but it would not necessarily hinder the tracing.

Mr. SPECTER. Fine.

Proceed.

Mr. HERNDON. During my initial adjustments of Mr. Ruby to the polygraph, I noticed that he had a breathing rate of approximately 21 cycles per minute, which is well within normal respiratory patterns. I noticed that his heart



rate was approximately 78 beats per minute, which is well within normal heart rate of individuals, and that there appeared to be no physical problems with regard to obtaining a satisfactory cardiogram, which monitors the cardiovascular system.

During series 1, two relevant questions were asked which were pertinent to the investigation.

Question No. 4, in which Ruby was asked, "Did you know Oswald before November 22, 1963?"

Mr. SPECTER. And what was his response to that question?

Mr. HERNDON. To that question he responded, "No," and an interpretation of the charts based on the premise that Ruby was mentally sound and competent would fail to indicate any physiological response which would be suggestive of deception.

Mr. SPECTER. And what is the basis for your conclusion that there was no deceptive response elicited to that question?

Mr. HERNDON. This conclusion is actually based on my interpretation and study of the overall charts which are still to come up. Actually, in series 1, I noticed, however, that Mr. Ruby did respond physiologically to a control type question: "Have you ever been arrested?"

This physiological response was in the form of a rather noticeable rise in his blood pressure. To this particular question he did answer "Yes," and later explained that he had been arrested for dancing after curfew at his own place.

He indicated by his answer that he was somewhat embarrassed by this.

Mr. SPECTER. Was that for dancing after curfew or for permitting others to dance after curfew?

Mr. HERNDON. I got the interpretation from his comments that it was permitting dancing, and him also being possibly involved in the party after curfew hours. This, to me, does indicate, if in fact Ruby was mentally competent, that he was capable of displaying emotional responses on the polygraph, in this instance not necessarily deception, but some concern, as portrayed by the relative rise in blood pressure.

During series 1 Mr. Ruby was also asked another relevant question, question No. 6, which was pertinent to the investigation, that question being: "Did you assist Oswald in the assassination?"

Mr. SPECTER. And what was his answer to that question?

Mr. HERNDON. To that question he responded "No," and if in fact he was mentally competent at the time he answered that question, the charts could be interpreted that there was no physiological response to the stimulus of the question.

Mr. SPECTER. When you say "could be interpreted," Mr. Herndon, do you mean that that was your opinion or your conclusion as to whether there was a physiological response?

Mr. HERNDON. I wish to qualify my opinion here based on the fact that I am responding under the hypothesis proposed by you that this chart is being interpreted, that Ruby is of sound mind, and was rational in his mental process when responding to this question.

Mr. SPECTER. Fine.

As I understand it, that is your basic hypothesis or assumption in all of your answers to interpretation?

Mr. HERNDON. Fine, if we will keep that in mind.

Mr. SPECTER. Yes. I think that is fair and I think we have put that on the record at the start so that whatever you interpret here is based on the assumption that he was in touch with reality, understood the questions, and knew what he was answering.

Mr. HERNDON. Correct, sir.

Mr. SPECTER. But the point I was coming to was, you said it "could be interpreted" that there was no pattern of deception, and my concern was whether there was any deliberate qualification in your answer on "could be interpreted" or whether it was your positive interpretation that assuming he knew what he was talking about and was sane, that there was no pattern of deception in his negative answer on the question of, "Did you assist Oswald in the assassination?"

Mr. HERNDON. To answer that question, Mr. Specter, I would have to go back

to my original statement that the polygraph technique is not considered precise enough to make absolute statements of deception or nondeception, so, therefore, any time I make any observation it would be using probably a qualified word such as "appeared to indicate deception" or "suggestive of deception," keeping in mind that, of course, there are many emotional responses that I am not in a position to evaluate, such as fear of being falsely accused, dislike for the people in the room, other factors which may tend to negate positive statements that here in fact this thing is meaning he is not lying.

Mr. SPECTER. On that particular question, were there any indicators at all that he was deceiving in his answer to question No. 6, to wit: "Did you assist Oswald in the assassination?"

Mr. HERNDON. Other than a slight impact in the GSR, there was no noticeable change in his physiological responses to that particular question.

Mr. SPECTER. And what was the slight impact that you referred to in the GSR, meaning galvanic skin response?

Mr. HERNDON. The impact here not being significant enough to make any specific evaluation.

Mr. SPECTER. Then were there any other relevant questions in the first series?

Mr. HERNDON. There were no other relevant questions in the first series.

Mr. SPECTER. Was there anything else in the first series which is significant enough to comment on by way of analysis of the overall examination?

Mr. HERNDON. No other than to say that the total chart minutes for series 1 was 2 minutes 25 seconds in duration of time.

Mr. SPECTER. Is there any fixed limitation on how long a series can run?

Mr. HERNDON. Yes, it is generally conceded that a person should not be run on the polygraph beyond perhaps 4 minutes, inasmuch as after that time the pressure on the arm cuff can become discomforting and irritating to the examinee.

In view of the fact that there was a question here of possible effect on Ruby's health, I attempted to maintain all my questioning within an approximate 3-minute period to insure no damaging effect on his physical condition.

Mr. SPECTER. Is there any overall limitation on the amount of time that a person can appropriately take a polygraph examination?

Mr. HERNDON. Yes, there is a limitation. Certainly if a person is interviewed with polygraph at great length, in due time he is bound to become desensitized to the technique. In other words, the pressure on his arm and the technique itself becomes less valid as the increase in time proceeds.

Mr. SPECTER. Did Mr. Ruby ever become desensitized to the technique?

Mr. HERNDON. I believe in the last series of the first session, which I believe is series 4, Mr. Ruby showed some indications of becoming fatigued and displayed some tiredness in the charts. Also, I might add in the latter phase of the examination, in the latter series, there was some indication that he was approaching this desensitization that I have mentioned before.

Mr. SPECTER. Have you now given us all the relevant findings from series of 1?

Mr. HERNDON. I think so. There might be one other thing I will just mention here, and that is in question 5 with regard to, "Do you use the middle name Leon" there were some noticeable changes in the physiological tracings. However, these were caused by his laughter and talking in which he later explained that he sometimes used the name, but other times he doesn't, and that the name Leon is sentimental to him. That is the only other noticeable variance in his normal tracing that I wish to comment on.

Mr. SPECTER. Let us then proceed now to series 2 and mark that Herndon Deposition Exhibit No. 2, if we may, please.

(The document referred to was marked Herndon Deposition Exhibit No. 2 for identification.)

Mr. SPECTER. Now, referring to that chart, what significant findings were there on that chart?

Mr. HERNDON. The only significant change physiologically during series No. 2 was in Mr. Ruby's response to the question, "Have you ever been known by another name?", as portrayed by an increase in his blood pressure. He answered this question with both a yes and a no, and after the series was completed there was some discussion with regard to the question. He mentioned that he was uncertain how to answer the question because he had originally

used the name of Jack Rubenstein and that he had legally changed it at a later date. Other than some variations in the pneumograph which were caused by his hesitating to answer due to the length of the questions provided, there is no other significant physiological change noticed in series 2.

Mr. SPECTER. And what were the relevant questions in series 2?

Mr. HERNDON. The relevant questions in series 2 were No. 3 "Are you now a member of the Communist Party?" in which there was no significant physiological change.

Mr. SPECTER. What was his response there?

Mr. HERNDON. He responded "No," to that question.

On question No. 5, which is considered relevant, he was asked, "Have you ever been a member of the Communist Party?" He responded "No," and there is no significant response recorded. There is an adjustment on my behalf of the cardiogram tracing.

Mr. SPECTER. What do you mean by that, Mr. Herndon?

Mr. HERNDON. Where this arrow is placed, and I brought down the tracing to a lower level so that I could see if there would be any subsequent rise.

Mr. SPECTER. And was it a consistent tracing thereafter indicating no deviation?

Mr. HERNDON. Yes. The cardiogram is interpreted as being consistent, and no significant change or deviation.

Mr. SPECTER. Now, what other relevant questions were asked in that series?

Mr. HERNDON. Question 7, "Are you now a member of any group that advocates the violent overthrow of the U.S. Government?" There is no significant change in his relative blood pressure, and the only change significant in his breathing pattern which by chart interpretation was caused by him hesitating to answer the question due to its length.

Mr. SPECTER. What was his response to that question?

Mr. HERNDON. He responded "No" to question No. 7.

Mr. SPECTER. Were there any other relevant questions in that group?

Mr. HERNDON. Question No. 8 was relevant. It was, "Have you ever been a member of any group that advocates the violent overthrow of the U.S. Government?" Here, again, he responded "No." There was no significant change.

Mr. SPECTER. Will you start that again?

Mr. HERNDON. Question No. 8 was "Have you ever been a member of any group that advocates the violent overthrow of the U.S. Government?"

This is a relatively long question for polygraph technique, and I note that there was some hesitation in the pneumograph tracing, in view of the fact he had to wait for the question to be completed before he could respond. He eventually did respond "No" and there was no significant change in his physiological tracings. The total chart minutes, that is the time that he was actually on the polygraph from the beginning to the end of this particular series, was 2 minutes 30 seconds.

Mr. SPECTER. Were there any other relevant questions in that group?

Mr. HERNDON. There were no other relevant questions in that group.

Mr. SPECTER. Were there any other significant findings in that portion of the test on series No. 2?

Mr. HERNDON. There was a control question "did you ever make a false official statement" to which he responded "No." There was a very minor change in the cardiograph tracing as portrayed by a slight decrease in the relative blood pressure. However, it is not considered significant enough to make any additional statements.

Mr. SPECTER. Now you have given us all the relevant findings for series No. 2; is that correct, Mr. Herndon?

Mr. HERNDON. Yes, sir.

Mr. SPECTER. Let us now proceed to the next series and mark the next series as Herndon Deposition Exhibit No. 3.

(Herndon Deposition Exhibit No. 3 was marked for identification.)

Mr. SPECTER. Would you start off on the third series, Mr. Herndon, by telling us what were the relevant questions and the responses thereto, if any?

Mr. HERNDON. During series 3, there were three relevant questions asked.

No. 3: "Between the assassination and the shooting, did anybody you know tell you they knew Oswald?"

He responded "No," and there was no significant physiological change recorded on the polygraph. There is a noticeable change in the pneumograph pattern. However, this has been interpreted again as being caused by the relatively long length of this particular question.

Question No. 5 was: "Aside from anything you said to George Senator on Sunday morning, did you ever tell anyone else that you intended to shoot Oswald?" In comparison to his overall chart, there is nothing of particular significance in his physiological responses to this question, when he responded "No" to question 5.

Question No. 8 was: "Did you shoot Oswald in order to silence him?" This again being a relevant question. He responded "No." There was no significant deviation in his physiological responses to this question.

During series 3 he was asked two control-type questions in which he did respond significantly with regard to the physiological tracings. Question No. 4 was asked: "Are you married?" Mr. Ruby responded "No." An interpretation of his polygrams reveal a rather significant rise in his relative blood pressure. He also produced a rather vivid impact on the GSR tracings, and there was noticeable staircase suppression in his pneumograph pattern. This question was later discussed with Mr. Ruby, and he said that he was thinking of a young girl by the name of Alice Nichols who he had previously considered marrying. He admitted that he felt something "working on him," with regard to this particular question. An analysis of this question would indicate that Ruby did emotionally respond to the stimulus of the question "Are you married," and his thoughts of a former sweetheart. This does not indicate that there was any deception of course, but does suggest Mr. Ruby does respond physiologically to certain emotions that he feels when he hears the questions and decides how to answer them. In a sense this is a control-type question. Also in this series, in question No. 7, Mr. Ruby was asked: "While in the service did you receive any disciplinary action?" There is a noticeable rise in his blood pressure after he responded "No." This question had been discussed rather thoroughly with him, and after the series was run, he admitted that he had been called in before his commanding officer regarding a brawl he had while in the military service. He also commented: "Evidently you are getting a good reading." This could be interpreted as a deception pattern inasmuch as in his mind he realized he had been in some trouble in the military service; however, did not want to truthfully answer the question as he considered it insignificant.

However, he did admit that he had been in some trouble with his commanding officer regarding fighting. This is considered a control question, and its response is greater than his response to the previous relevant question which I had related.

Mr. SPECTER. Would there be any difference in psychological reactions, Mr. Herndon, on a pattern of deception which the subject considered insignificant as opposed to a pattern of deception which the subject considered significant?

Mr. HERNDON. Generally the concept of the polygraph technique is that we are attempting to find out what a man's physiological responses will be in any area where he is attempting to deceive. The content of the actual deception is not particularly important. We want to get a tracing of where he is attempting to deceive. Now under a situation such as Mr. Ruby was in here, it is more probable that he is more concerned about these relevant questions than these irrelevant or control-type questions. In other words, the relevant questions have more to do with his well-being or what he is trying to prove to the Commission. However, the chart here still shows that he attempted to deceive with regard to what he considered insignificant, but it tends to indicate to me that he will respond to a practice of deception, if that answers your question.

Mr. SPECTER. What I am driving at here is whether there is any gage in whether he considers it insignificant or significant in the reading. Stated differently, there would be a response even though he might consider a question to be insignificant.

Mr. HERNDON. That is right. If there is an attempt on his part to practice deception, if he again, as I say, is competent and reasoning rationally. In general practice of polygraph work, generally speaking the control questions are of lesser

severity than the actual pertinent questions, but in those cases where the person appears to be telling the truth, we find that they will respond more to the control questions than the critical question, even though the critical question has more potency and is more severe with regard to his well-being.

Mr. SPECTER. Were there any other significant findings on that chart?

Mr. HERNDON. Yes. Mr. Ruby also responded significantly in a physiological sense with regard to question 9: "Have you ever served time in jail?" He failed to actually respond yes or no. However, there was a decrease in his blood pressure, a moderate impact in the GSR, and a change in the baseline of his pneumograph tracing. The fact that he actually failed to say yes or no precludes my interpretation of whether or not this is an indication of deception, but it does indicate that Ruby did experience a physiological variation from his normal pattern with regard to this question which is of a control-type nature.

Mr. SPECTER. Does that complete then the relevant findings on that chart?

Mr. HERNDON. That concludes series No. 3. It might be worthwhile to record that the total chart minutes on this particular series was 2 minutes 45 seconds.

Mr. SPECTER. Let us then mark the next series, which is series 3a, as Herndon Deposition Exhibit No. 4.

(Herndon Deposition Exhibit No. 4 was marked for identification.)

Mr. SPECTER. Would you start there on series 3a with the relevant questions, the responses and your evaluation of any significant psychological deviation, please?

Mr. HERNDON. This particular series 3a was what would be called a modified peak of tension series. Ruby was carefully instructed prior to the series that four relevant questions were going to be asked in a consecutive order.

Question No. 3: "Did you first decide to shoot Oswald on Friday night?" He responded "No."

Question No. 4: "Did you first decide to shoot Oswald on Saturday morning?" He responded "No."

Question No. 5: "Did you first decide to shoot Oswald Saturday night?" He responded "No."

Question No. 6: "Did you first decide to shoot Oswald Sunday morning?" He responded "Yes."

These are the only relevant questions in this series. A review of the chart with regard to his responses in this series reveals that Ruby's blood pressure continually rose from the question No. 3 until it reached a peak just as question No. 6 was asked. In addition it was noted that there was a rather noticeable change in his breathing pattern as question No. 6 was approached. There is a slight impact in the GSR tracing as question No. 6 is approached. This would mean to me in interpreting the chart that Ruby reached a peak of tension as the question No. 6 was about to be asked in which he responded "Yes" to "Did you first decide to shoot Oswald Sunday morning?" This particular type of series cannot be interpreted with regard to whether or not there was any deception, but it does indicate that Ruby built up a physiological peak of tension to the time of Sunday morning with regard to his decision of shooting Oswald.

Mr. SPECTER. Is there any correlation between the building up of a peak of tension and the accurate answer to the series?

Mr. HERNDON. In normal usage of polygraph technique where a peak of tension is used, if the series is effective, the party will usually respond to a particular item which happens to be the most pertinent with regard to the offense. In this case it appears that Ruby projected his entire thoughts and built up a physiological peak of tension to the point of Sunday morning.

Mr. SPECTER. Are there any other significant readings on Exhibit No. 4?

Mr. HERNDON. There is no other significant reading on series 4. The total chart minutes was 2 minutes.

Mr. SPECTER. Let's move on then to series No. 4 and we will mark that as Herndon Deposition Exhibit No. 5.

(Herndon Deposition Exhibit No. 5 was marked for identification.)

Mr. SPECTER. I will ask you to start on that one, Mr. Herndon, by giving us the relevant questions and answers to those relevant questions and the responses, if any?

Mr. HERNDON. I believe this is series No. 4.

Mr. SPECTER. Yes; series No. 4, and we have marked it as Exhibit No. 5. We are one out of number now since we have used an "A" series.

Mr. HERNDON. In series No. 4, Mr. Ruby was asked four relevant questions.

Question No. 2: "Were you on the sidewalk at the time Lieutenant Pierce's car stopped on the ramp exit?" He responded "Yes."

Question No. 4: "Did you enter the jail by walking through the alleyway?" Mr. Ruby responded "No."

Question No. 6: "Did you walk past the guard at the time Lieutenant Pierce's car was parked on the ramp exit?" Mr. Ruby replied "Yes."

Question No. 8: "Did you talk with any Dallas police officer on Sunday, November 24, prior to shooting Oswald?" Mr. Ruby replied "No."

With regard to chart interpretation on this particular series of questions, it is difficult to interpret because this is the first series where Mr. Ruby tends to show a little fatigue in that he took several deep breaths, could not refrain from moving his foot and the rest of his body, and, in general, the chart is relatively difficult to interpret.

However, considering these body motions and his irregular breathing, there appear to be no significant physiological variations with regard to his response to the relevant questions as projected in that series. There is one question in which he displayed a moderate rise of blood pressure, and that was in regard to an irrelevant question No. 5: "Are your parents alive?" In which he stated "No." He was questioned about this after the series was over, and he advised that he felt a little nervous during this series, but that particular question didn't give him any trouble. His breathing is quite irregular throughout this series, and I have a notation on my chart that I advised Mr. Specter that Mr. Ruby was beginning to show some signs of fatigue, and it was mutually agreed that we would have a recess at this point.

Mr. SPECTER. How long did that recess last, Mr. Herndon?

Mr. HERNDON. This particular series began according to my charts at 4:35 p.m., and the next subsequent series began at 6:48 p.m.

Mr. SPECTER. Have you now given us all the important findings on series 4?

Mr. HERNDON. Yes; I have.

Mr. SPECTER. Let's move on now then to series No. 5 and mark that as Herndon Deposition Exhibit No. 6.

(Herndon Deposition Exhibit No. 6 was marked for identification.)

Mr. SPECTER. I will ask you to start with the relevant questions again, and give us the answers and any significant physiological deviation.

Mr. HERNDON. This particular series which my notes refer to as series No. 5 began at 6:48, and Mr. Ruby was asked four relevant questions.

Question No. 2: "Did you see the armored truck before you entered the basement?" He replied "No."

Question No. 4: "Did you enter the police department through a door at the rear on the east side of the jail?" He responded "No."

Question No. 6: "After talking to Little Lynn did you hear any announcement that Oswald was about to be moved?" He responded "No."

Question No. 8: "Before you left your apartment Sunday morning, did anyone tell you the armored car was on the way to the police department?" He replied "No."

The one particular thing of interest with regard to overall interpretation of this chart is how Ruby showed considerable more relaxation and appeared to be completely at ease after the recess. There was no physiological variation of any significance noted with regard to his replies to the relevant questions. There is some deviation with regard to his pneumograph tracing at question No. 7, which is considered a control-type question. This question was: "Other than what you told me, did you ever hit anyone with any kind of a weapon?" He responded to this question by talking. However, he later asked that the question be repeated. The question was repeated during the series, and he responded "No." The only significant deviation from his normal pattern was recorded in the pneumograph, and this was caused by his talking in response to the question the first time it was asked.

There is nothing else significant noted in series No. 5.

Mr. SPECTER. Let's proceed then to series No. 6 and we will mark that as Herndon Deposition Exhibit No. 7.

(Herndon Deposition Exhibit No. 7 was marked for identification.)

Mr. HERNDON. Do you want the total chart minutes?

Mr. SPECTER. Yes; please give us that.

Mr. HERNDON. The total chart minutes of series 5 was 2 minutes 55 seconds.

Mr. SPECTER. May the record show now that we have marked series No. 6 as Herndon Exhibit No. 7. Would you now, Mr. Herndon, specify the relevant questions, responses, and psychological deviations, if any?

Mr. HERNDON. In series No. 6 Mr. Ruby was asked four relevant questions.

No. 2: "Did you get a Wall Street Journal at Southwestern Drug Store during the week before the assassination?" He replied "No."

Question No. 4: "Do you have any knowledge of a Wall Street Journal addressed to a Mr. J. E. Bradshaw?"

He replied "No."

Question No. 6: "To your knowledge did you or any of your friends telephone the FBI in Dallas between 2 and 3 a.m. Sunday morning?" He replied "No."

Question No. 8: "Did you or any of your friends to your knowledge telephone the sheriff's office between 2 or 3 a.m. Sunday morning?" He replied "No."

From a review of Mr. Ruby's polygrams, on series 6, it was noted that there were no significant physiological variations to his response to the relevant questions. It was noted that Mr. Ruby did display slight suppression in his breathing pattern, and a relative decrease in blood pressure with an increase in the heart amplitude at question No. 7. This question was: "Did you ever overcharge a customer?" Mr. Ruby replied "No." However, after the series, this question was discussed with him briefly, and he did make mention of the fact that there had been some trouble at his nightclub with regard to the waitresses and big bills. This could be interpreted as a possible deception pattern in that he hedged with regard to the question "Did you ever overcharge a customer." The total chart minutes of series No. 6 was 2 minutes 50 seconds.

Mr. SPECTER. Are there any other significant findings on series 6?

Mr. HERNDON. The only significant finding being that the control question 7 displays a more significant variation than his response to the relevant questions. There are no others.

Mr. SPECTER. You have now given us then all the significant findings on series 6?

Mr. HERNDON. That is correct.

Mr. SPECTER. May the record show that we are now placing the designation Herndon Deposition Exhibit No. 8 on series No. 7.

(Herndon Deposition Exhibit No. 8 was marked for identification.)

Mr. SPECTER. Would you start again, Mr. Herndon, with the relevant questions and tell us the answers and the responses thereto with any significant findings?

Mr. HERNDON. Series No. 7 contains four relevant questions.

Question No. 2: "Did you go to the Dallas police station at any time on Friday, November 22, 1963, before you went to the synagogue?" Mr. Ruby replied "No."

Question No. 4: "Did you go to the synagogue that Friday night?" Mr. Ruby replied "Yes."

Question No. 6: "Did you see Oswald in the Dallas jail on Friday night?" Mr. Ruby replied "Yes."

Question No. 8: "Did you have a gun with you when you went to the Friday midnight press conference at the jail?" Mr. Ruby replied "No."

There was one other question asked which I consider irrelevant. However, it is of value to the series, and I will make mention of it, question No. 9: "Is everything you told the Warren Commission the entire truth?" Mr. Ruby responded "Yes."

With regard to overall interpretation of series No. 7, I first noticed there is a physiological deviation to Mr. Ruby's response to question No. 1 which was "Do you intend to answer the questions truthfully." However, my notes indicate that Mr. Ruby talked and said "Yes, I do," and by actually speaking several words it is believed that this caused the variation in the tracings.

Mr. SPECTER. Will movement or speaking cause a variation in the tracings ordinarily, Mr. Herndon?

Mr. HERNDON. Yes. Body movements or speaking any phrase or sentence would certainly cause changes in the physiological patterns as displayed on the polygraph. I made notation of that, however, and that explains the changes. On question No. 2, Mr. Ruby did show a significant drop in the relative blood pressure. This question pertained to: "Did you go to the Dallas police station at any time on Friday November 22, 1963, before you went to the synagogue?" I asked him about this question later when he responded "No," and I noticed a physiological change. He advised that there was some man by the name of John Rutledge, and he made an association with proceedings at the trial which I have reason to believe this gentleman, John Rutledge, differed somewhat with what Ruby stated as to when he went to the synagogue.

Due to the nature of this change, however, it is possible that it was caused by a body motion that I failed to detect during the actual response.

I notice that the cardio pen dropped all the way down and hit what we call the limit screws. This frequently is caused by a sudden rapid shift in his body position, and this change could have been caused by a body movement.

With regard to the other relevant questions in this series, question 4, question 6, and question 8, there was no significant deviation from his normal physiological patterns.

Mr. SPECTER. Were there any other significant findings, in series No. 7?

Mr. HERNDON. There was a significant change in his breathing pattern and also a slight decrease in his blood pressure when I asked him the question "Did you attend the synagogue regularly?"

However, this is a control type question, and as later discussed with him, there was some area of doubt in his mind as to whether he attended the synagogue regularly as much as he would like to. The total chart minutes on series 7 was 2 minutes 55 seconds.

Mr. SPECTER. Have you now given all the relevant findings on chart No. 7?

Mr. HERNDON. Yes, I have.

Mr. SPECTER. May the record show that I have affixed Herndon Deposition Exhibit No. 9 to series No. 8.

(Herndon Deposition Exhibit No. 9 was marked for identification.)

Mr. SPECTER. I hand it to you with the request that you give us the findings there starting with the relevant questions.

Mr. HERNDON. Series No. 8 contained five relevant questions.

No. 2: "Have you ever knowingly attended any meetings of the Communist Party or any other group that advocates violent overthrow of the Government?" Mr. Ruby replied "No."

I notice in the pneumograph tracing some deviation. However, by interpretation of the chart and the length of that particular question, it again appears obvious that there was some hesitation on his part in answering the question due to its length.

However, there was no other noticeable significant physiological deviation in his response to that question.

Question No. 4: "Is any of your immediate family or any close friend a member of the Communist Party?" Mr. Ruby replied "No" and there is no significant change in his normal physiological pattern.

Question No. 6: "Is any of your immediate family or any close friend a member of any group that advocates the violent overthrow of the Government?" This again is a relatively long question. However, it did not appear to disturb him, and there is no noticable physiological deviation in his response to this question.

Question No. 8: "Did any close friend or any member of your immediate family ever attend a meeting of the Communist Party?" Mr. Ruby replied "No."

Here again there is no noticable significant deviation in his physiological pattern.

Question No. 9: "Did any close friend or any member of your immediate family ever attend a meeting of any group that advocates the violent overthrow of the Government?" Here again this is a relatively long question and there was a little hesitation on his part in answering it, causing a change in the



pneumograph tracing. However, there is no significant deviation with regard to his overall physiological pattern when he responded to this question. In general, series 8 shows no significant deviation from his normal physiological pattern. The total chart minutes was 2 minutes 50 seconds.

Mr. SPECTER. You have now then given us all of the relevant findings on series No. 8, correct?

Mr. HERNDON. Correct, sir.

Mr. SPECTER. I now hand you the chart designated series No. 9 marked Herndon Deposition Exhibit No. 10, and ask you if there was any unique system employed in that series.

(Herndon Deposition Exhibit No. 10 was marked for identification.)

Mr. HERNDON. Yes, there was at this point in the interrogation. Realizing the Commission had a large number of questions they wanted to ask, it was decided at this point, in view of the fact that we had asked the main critical questions, to proceed with what I call direct interrogation, that is that each and every one of the questions asked is a relevant question, and that there are no irrelevant questions or control questions asked.

Mr. SPECTER. Would you proceed then to give us the results of those questions.

Mr. HERNDON. Did you want me to itemize each and every one of these questions or read them out? They are all relevant questions and a matter of record.

Mr. SPECTER. Yes, please do.

Mr. HERNDON. Series 9 contains 7 questions, all being relevant.

Question No. 1: "Did you ever meet Oswald at your post office box?" Mr. Ruby replied "No."

Question No. 2: "Did you use your post office mail box to do any business with Mexico or Cuba?" Mr. Ruby replied "No."

Question No. 3: "Did you do business with Castro Cuba?" Mr. Ruby replied "No."

Question No. 4: "Was your trip to Cuba solely for pleasure?"

Mr. Ruby replied "Yes."

Question No. 5: "Have you now told us the truth concerning why you carried \$2,200 in cash on you?" Mr. Ruby replied "Yes."

Question No. 6: "Did any foreign influence cause you to shoot Oswald?" Mr. Ruby replied "No."

Question No. 7: "Did you shoot Oswald because of any influence of the underworld?" Mr. Ruby replied "No."

In interpreting his chart with regard to this particular series of questions, there is no noticeable significant deviation in his physiological pattern except at question No. 6. According to my notation on the chart, Ruby moved his head at this point, and there was a deviation caused by this movement in his blood pressure tracing and also in his pneumograph tracing. His heart rate maintained a consistent rate of approximately 66 to 72 heart beats per minute throughout this series. No significant changes.

Mr. SPECTER. What was the total time on that series?

Mr. HERNDON. The total chart minutes on series 9 was 2 minutes 15 seconds.

Mr. SPECTER. Have you now given us all the relevant factors from that series reading?

Mr. HERNDON. Yes; I have.

Mr. SPECTER. Let the record show that you are going to proceed with series 9A which is a continuation of the sheet marked Herndon Exhibit No. 10.

Mr. HERNDON. This was done in order to save time inasmuch as the interrogation was becoming rather lengthy at this point, and Mr. Specter indicated he was anxious to proceed and to complete the rest of the questions that we had agreed upon with all those parties that were interested in this interrogation.

Series No. 9A again is a series of relevant questions.

Question No. 8: "Did you shoot Oswald because of labor union influence?" Mr. Ruby replied "No."

Question No. 9: "Did any long distance telephone calls which you made before the assassination of the President have anything to do with the assassination?" Mr. Ruby replied "No."

Question No. 10: "Did any of your long distance telephone calls concern the shooting of Oswald?" Mr. Ruby replied "No."

Mr. SPECTER. What number question was that again?

Mr. HERNDON. Question No. 10.

Question No. 11: "Did you shoot Oswald in order to save Mrs. Kennedy the ordeal of a trial?" Mr. Ruby replied "Yes."

Question No. 12: "Did you know the Tippit that was killed?" Mr. Ruby replied "No."

Question No. 13: "Did you tell the truth about relaying the message to Ray Brantley to get McWillie a few guns?" Mr. Ruby replied "Yes."

Question No. 14: "Did you go to the assembly room on Friday night to get the telephone number of KLIF?" Mr. Ruby replied "Yes."

Question No. 15: "Did you ever meet with Oswald and Tippit at your club?" Mr. Ruby replied "No."

Mr. SPECTER. On the designations series 9 and 9A, Mr. Herndon, did you loosen up the cuff on his arm during the two series?

Mr. HERNDON. Yes; I deliberately loosened or actually I completely took off all pressure off his arm to allow him to have complete circulation in his arm and to give him a rest period before proceeding with series 9A. I believe the transcript will show that I asked him if he was feeling all right and if he was ready to proceed before going into series 9A. A review of series 9A with regard to Ruby's polygrams fails to reveal any significant physiological reaction with regard to his responses to these relevant questions.

At this point, Mr. Specter, I might add that we are getting into an area now where it is possible that Ruby is getting somewhat cuff weary and getting somewhat tired and becoming somewhat immune to the polygraph technique. I believe we both realized this.

However, we wanted to ask these questions as a matter of record. The chart shows there is no stress or strain. However, it is entirely possible that he is becoming desensitized at this point.

Mr. SPECTER. Have you now given us all the relevant findings on series 9a?

Mr. HERNDON. Yes; the total chart minutes for this particular series was 2 minutes 30 seconds.

Mr. SPECTER. I now hand you series No. 10 which is marked Herndon Deposition Exhibit No. 11, and ask you to start again with the relevant questions and give us the responses thereto and any significant findings.

(Herndon Deposition Exhibit No. 11 was marked for identification.)

Mr. HERNDON. Series No. 10 again was mutually agreed upon by several of the people present during the examination. However, formally authorized by Mr. Specter of the President's Commission. They are question No. 2 which is relevant: "Were you at the Parkland Hospital any time on Friday?" Mr. Ruby replied, "No."

Question No. 3, which is considered relevant. "Did you say anything when you shot Oswald other than what you testified about?"

Mr. Ruby replied, "No."

Question No. 4, which was originally recommended by Dr. Beavers and as agreed upon by Mr. Specter, was presented in this manner.

Question No. 4: "Have members of your family been physically harmed because of what you did?" Mr. Ruby—could we go off the record here? I am a little confused on my notes at this point?

Mr. SPECTER. Yes; off the record.

(Discussion off the record.)

Mr. SPECTER. May the record show that while off the record Mr. Herndon has referred to his notes and also to the transcript of testimony taken by the court reporter at the time the polygraph examination was administered, to be sure of the questions and answers here, and that as Mr. Herndon points out, his notes correspond with the transcript.

Will you then proceed Mr. Herndon to state those questions, answers and responses, if any?

Mr. HERNDON. Yes; No. 4 was: "Have members of your family been physically harmed because of what you did?" Mr. Ruby did reply "No," and then said: "May I interrupt?" He was instructed by me to just sit perfectly still and we will discuss the questions later. There was a deviation in his physiological tracings with regard to this question. However, these must be interpreted to the fact that he actually spoke a sentence in response to the question.

Question No. 5 was: "Do you think members of your family are now in danger because of what you did?" Mr. Ruby failed to make any reply or response to this particular question. It is noted that there was no significant change in his physiological tracings in any of the components following my asking this question.

Question No. 6 was: "Is Mr. Fowler in danger because he is defending you?" Here again Mr. Ruby failed to make any verbal reply to the question. Looking at the polygrams produced, it is noted that there is no significant physiological response with regard to this question. The examiner made a notation on his chart that it appeared that Mr. Ruby was visibly pondering the answer to these questions. However, decided not to answer them as instructed either yes or no period.

Question No. 7 is a relevant question: "Did Blackie Harrison speak to you just before you shot Oswald?" Mr. Ruby replied "No" and there is a slight increase in his relative blood pressure. However, this is not considered significant inasmuch as it is at the end of the series, and it is not unusual for slight increase in blood pressure to be portrayed as the series prolongs into the later questions. It is not considered significant.

The total chart minutes on this particular series was 2 minutes 25 seconds.

In discussion of the two questions in which Mr. Ruby failed to reply, I made notations on the chart that he felt the questions were difficult to answer yes or no, and that he didn't know how to answer them.

Mr. SPECTER. By those questions do you mean the ones——

Mr. HERNDON. I am referring to question 5 and 6 in which he did not specifically reply verbally.

Mr. SPECTER. That is "Do you think members of your family are now in danger because of what you did?"

Mr. HERNDON. That is correct.

Mr. SPECTER. And "Is Mr. Fowler in danger because he is defending you?"

Mr. HERNDON. That is correct.

Mr. SPECTER. Did Mr. Ruby answer those in a preliminary session?

Mr. HERNDON. During the preliminary session he did answer those questions.

Mr. SPECTER. What answer to each question did he give?

Mr. HERNDON. To the question "Do you think members of your family are now in danger because of what you did?" he replied "Yes."

In regard to the question "Is Mr. Fowler in danger because he is defending you?" Mr. Ruby replied "Yes."

Mr. SPECTER. Have you now given all the significant findings on series No. 10?

Mr. HERNDON. Yes; I have.

Mr. SPECTER. I will now move to series No. 11 which we will mark for this record as Herndon Deposition Exhibit No. 12.

(Herndon Deposition Exhibit No. 12 was marked for identification.)

Mr. SPECTER. Will you start on series No. 11, giving the relevant questions, answers and any physiological deviation?

Mr. HERNDON. These questions on Series 11 were primarily asked after a conversation between Mr. Ruby and Mr. Specter at which time Mr. Ruby indicated he wanted some additional questions asked of him.

It was finally agreed upon that we would ask the three following questions.

No. 1 just to establish identity "Are you Jack Ruby?" in which he replied "Yes."

Question No. 2: "Do you consider yourself to be a 100-percent American patriot?" Mr. Ruby responded "Yes."

And question No. 3 "Is all of the testimony given by you today the complete truth?" Mr. Ruby replied "Yes."

This particular series began at 8:57 p.m., and a review of the physiological

responses to these three particular questions indicate that they are not significant. It is believed by the examiner at this point, although Mr. Ruby said he was not tired in his general conversation with the examiner, that he was probably somewhat fatigued, and he was no longer displaying the usual physiological responses expected during the earlier phases of the examination.

The total chart minutes of series 11 is 1 minute 10 seconds. I do not consider anything significant to these particular responses other than the fact that we obliged Mr. Ruby in asking them.

Mr. SPECTER. Was this polygraph examination excessive with respect to length in your opinion, Mr. Herndon?

Mr. HERNDON. Well, it would greatly depend on Mr. Ruby's physical and mental condition of course. A doctor was in attendance during the examination, and I repeatedly asked Mr. Ruby during the examination how he felt and whether he wanted to proceed. I asked him on several occasions if he would like to take a break or have a drink of water. I cannot specifically state that it did or did not appear to hinder his health or cause him any undue fatigue.

However, I did hear the doctor indicate that there was no undue physical stress or strain on Mr. Ruby during the examination.

Mr. SPECTER. Up until the points where you have indicated there were some signs of tiredness, did Mr. Ruby appear to be responding in a satisfactory manner?

Mr. HERNDON. I would say during the first several series of questions, and based on the presumption again that Mr. Ruby was rationally sound and competent during this phase of the examination, that he responded very normally, and the polygraph examination proceeded without any technical difficulties.

Mr. SPECTER. Was Mr. Ruby given periodic breaks throughout the course of the examination in addition to that lengthy one between series 4 and series 5?

Mr. HERNDON. Yes; he was given a number of breaks and there was no time when he was asked a long series of questions inasmuch as the total chart, minutes on my charts indicate none of them went beyond 3 minutes, which is certainly considered well within standard series total chart minutes.

Mr. SPECTER. Do you have anything to add which you think would be helpful to the President's Commission?

Mr. HERNDON. Yes. I would like to make a few additional comments with regard to this polygraph examination, in view of the fact that it was somewhat unique and unusual. I think these factors should be somewhat considered in the overall evaluation of the polygraph examination.

First of all, Ruby has obviously been extensively interviewed by law enforcement officers and by the Commission and other people, and there has been a considerable length of time lapse since the time that the instant offense occurred of him shooting Oswald. These factors of length of time and considerable previous interrogation would tend to detract or negate any specific or definite conclusion that could be rendered with regard to the polygraph examination.

The fact that there were other personnel in the room would tend to negate a valid polygraph technique. However, here again I did mention that this did not appear to bother Mr. Ruby. But it should be considered and made a matter of record.

One other point I would like to mention, and that is the large number of relevant questions asked Mr. Ruby during this particular examination. This is not general standard procedure. However, I realize that the President's Commission wanted to cover many facets, and that it was mutually agreed upon that we would ask the questions that the Commission had originally drawn up for this particular interrogation. In normal polygraph procedure it is usual to keep the relevant questions down to perhaps several specific critical relevant questions and work strictly on those, and in this particular examination we had a large number of relevant questions to ask.

I think these are all factors that should be considered in the overall evaluation of Mr. Ruby's polygraph examination.

Mr. SPECTER. Thank you very much, Mr. Herndon.